

REMARKS

Claims 1-25 are pending in the instant application. Claims 1, 20 and 21 have been amended and new Claims 26 and 27 are submitted for consideration by the Examiner. Applicants respectfully request reconsideration and allowance of the instant application.

Applicants believe that the above amendments overcome the rejection under 35 U.S.C. 112. Applicants respectfully request withdrawal of these objections and rejections.

The rejection of Claims 1-2, 4-12, 15-16, 18-19 and 22-25 under 35 U.S.C. 102(b), as being anticipated by Maurer et al (U.S.P.N. 3,444,007), is respectfully traversed.

Maurer employs a process that includes chromates (i.e., a chromate rinse) and, therefore, produces a product containing chromates. It is important to note that Col 4, Lines 7-27 of Maurer indicates that the complete process of Maurer includes rinsing in chromic acid. In contrast, the rejected claims recite a process that is substantially free of chromates, and in Claim 1 about 0wt.% hexavalent chromate. Maurer, therefore, does not disclose each and every aspect of the claims and cannot anticipate the claimed invention.

The rejection of Claim 20 under 35 U.S.C. 102(b) as being anticipated by Nakatsugawa (U.S.P.N. 4,386,139), is respectfully traversed.

Nakatsugawa is limited to treating a copper foil. Further Nakatsugawa employs chromates. Applicants respectfully submit that Nakatsugawa cannot anticipate each and every aspect and, accordingly, request withdrawal of this rejection.

The rejection of Claim 21 under 35 U.S.C. 103(a) as being unpatentable over Nakatsugawa, is respectfully traversed.

It is noted that Nakatsugawa is limited to copper foil. The instant record does not support the position that it is well known in the art that printed circuit boards contain a conductive metal core of aluminum, nickel or zinc. Applicants respectfully submit that such a position should be supported by a reference that is properly combined with Nakatsugawa, or withdrawn.

The rejection of Claims 13, 17 and 21 under 35 U.S.C. 103(a) as being unpatentable over Maurer et al., is respectfully traversed.

Maurer et al. have the aforementioned deficiencies. Col. 3, Lines 1-3 of Maurer indicate that there is "...no particular advantage gained from large quantities of the metal ions...". The examples of Maurer use relatively low quantities of metal ions. In light of the teaching that there is no advantage to using large quantities and that lower quantities are actually used, a skilled person in this art would not find it "obvious to try" the claimed amounts. Applicants respectfully submit that Maurer is insufficient to establish a *prima facie* case of obviousness and, therefore, request withdrawal of this rejection.

The rejection of Claims 1, 3-5, 8-13, 15, 17, 19 and 21 under 35 U.S.C. 103(a) as being anticipated by Hanagata et al. (U.S.P.N. 5,057,335), is respectfully traversed.

Hanagata does not disclose a rinsing step after removal from the claimed medium. Hanagata cannot disclose each and every aspect of the claimed invention and, therefore, fails to establish a *prima facie* case of obviousness against the rejected claims.

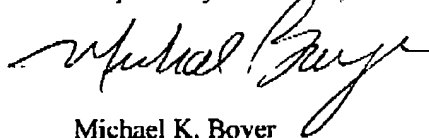
The rejection of Claims 10, 14 and 17 under 35 U.S.C. 103(a) as being unpatentable over Hanagata et al. in view of Nakatsugawa, is respectfully traversed.

Hanagata and Nakatsugawa are non-analogous art. Hanagata relates to using a laser to form a ceramic coating upon metal surface by immersing a substrate in a solution and then exposing the immersed substrate to a laser beam (e.g., in order to form an oxide layer upon the substrate). In contrast, Nakatsugawa relates to electroplating to form a printed circuit by a process that avoids oxidation. A skilled person in these respective arts would not consider laser irradiation as being related to electroplating. Further a skilled person in this art would believe that a laser beam projected onto the immersed circuits of Hanagata would interfere with Hanagata's processes (e.g., by oxidizing the

copper). Accordingly, these non-analogous references cannot be properly combined to render the claimed invention obvious.

Applicants believe that the claimed invention defines patentable subject matter and request issuance of a Notice of Allowability. Please find attached hereto a Three Month Extension of Time. Should there be any other fee due in connection with this Response, please charge the same to Deposit Account No. 15-0680 (Orscheln Management Co.). Should the Examiner deem that any further action on the part of Applicant would be desirable, the Examiner is invited to telephone Applicants' attorney.

Respectfully Submitted,



Michael K. Boyer
Attorney for Applicants
U.S. Patent Off Reg No 33,085
Tel: 660 269-4536
Fax: 660 269-4530
Email: mboyer@orscheln.com

Encl.: Three Month Extension of Time

RCE Transmittal

Certificate of Facsimile Transmission Dated: 7/2/06